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United States Department of Agriculture  
Bureau of Entomology and Plant Quarantine

OVIPOSITION CAGE FOR OBTAINING LARGE QUANTITIES  
OF CODLING MOTH EGGS

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The oviposition cage shown in the accompanying figures was patterned after one made by James Marshall and the writer while at the Wenatchee laboratory of the Washington Agricultural Experiment Station. \* It was employed to obtain large numbers of codling moth eggs for use in insecticide tests. It is likely that it could also be used for other species.

The cage is a tightly constructed box of 3-ply veneer, 18 by 18 by 48 inches. On one side are three openings (fig. 1)  $11\frac{1}{2}$  by 12 inches, with a similar opening at one end. Each of these is covered by a pane of glass in a light wooden frame, hinged to the side of the box. Around each window opening is glued a strip of mohair (fig. 1, a) one-half inch wide, with a nap about 4 mm. long. Similar strips are glued in channels in the frames, deep enough to permit the naps of the strips barely to touch. Waxed paper from a roll (fig. 1, b) suspended beneath each window can then be drawn between the glass and the window openings without injury to any codling moth eggs on it, while the moths are still retained inside the box. The glass retains the heat if the cage is used in cold weather, and also keeps the paper from being misplaced. Care should be taken that the window openings are narrower than the paper to be used, or the moths will collect between the paper and the glass and cause a great deal of trouble.

Two trap doors, 6 inches wide, open the entire length of the box (fig. 1, c; fig. 2, d), directly over the windows, and afford a means of hanging apples in the oviposition chamber in case the eggs are desired directly on the fruit. Removable racks are provided, which enable the operator to slip the apples in quickly, with a minimum loss of moths. The bottoms of these doors are covered with screen (fig. 1, d), with a smaller door opening above (fig. 1, e) so that moths resting on the under side of the screen may be blown off before the doors are opened. The small doors also afford a means of ventilation.

The codling moths used are obtained from larvae caught in corrugated paper bands on infested trees the previous fall. The bands are rolled up separately and kept in cold storage until needed. The rolls are placed in the

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<sup>2</sup> Peterson, Alvah. A Manual of Entomological Equipment and Methods. Part I. 1934. Plate 26.

cage by means of three drawers (fig. 2, a) located on the side opposite the windows. The side facing the windows and the bottom of each drawer are constructed of coarse-mesh wire screen to give emerging moths easy access to the oviposition chamber.

The moths, attracted to the windows by the light, deposit their eggs on the waxed paper, the exposed section of which is removed daily. Oviposition elsewhere is discouraged by having all other surfaces in the cage either sanded or covered with screen. Sanding is done by applying shellac and throwing sand on it while still wet. An electric lamp may be suspended before each window if necessary to provide the proper amount of light.

The entire bottom of the cage is covered by three shallow drawers (fig. 2, b), which may be withdrawn at times to remove dead moths.

A compartment, 8 inches square (fig. 2, c), is screened off from the rest of the oviposition chamber and provides a place for the installation of heating and humidifying apparatus where it can be adjusted without allowing the moths to escape. No extra heat or humidity is needed, however, during the summer months.

The cost, exclusive of labor, was \$12.40, and the cage was constructed by a cabinet maker in about 40 hours.

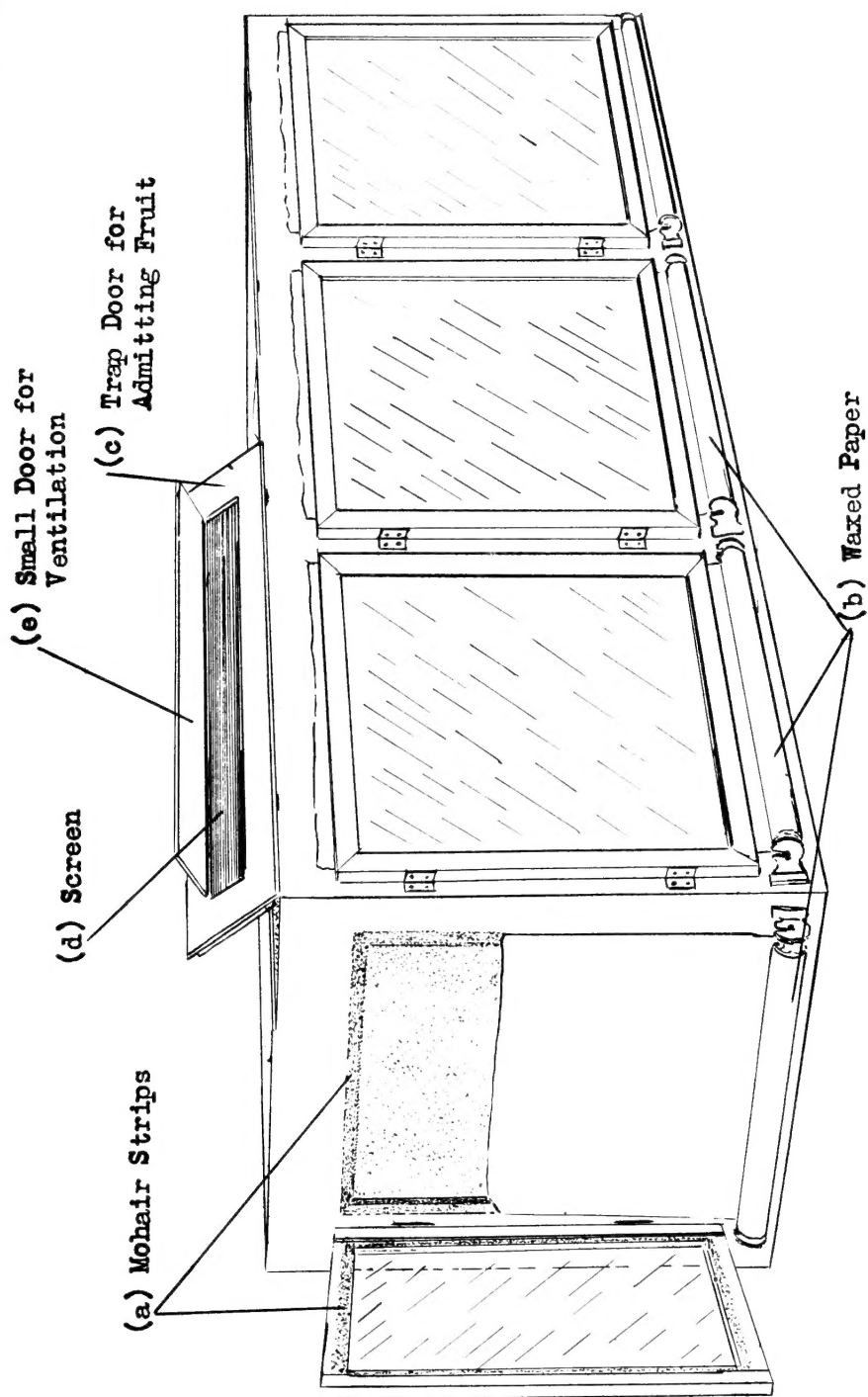


Fig. 1.—Oviposition Cage for Codling Moth. Front View.



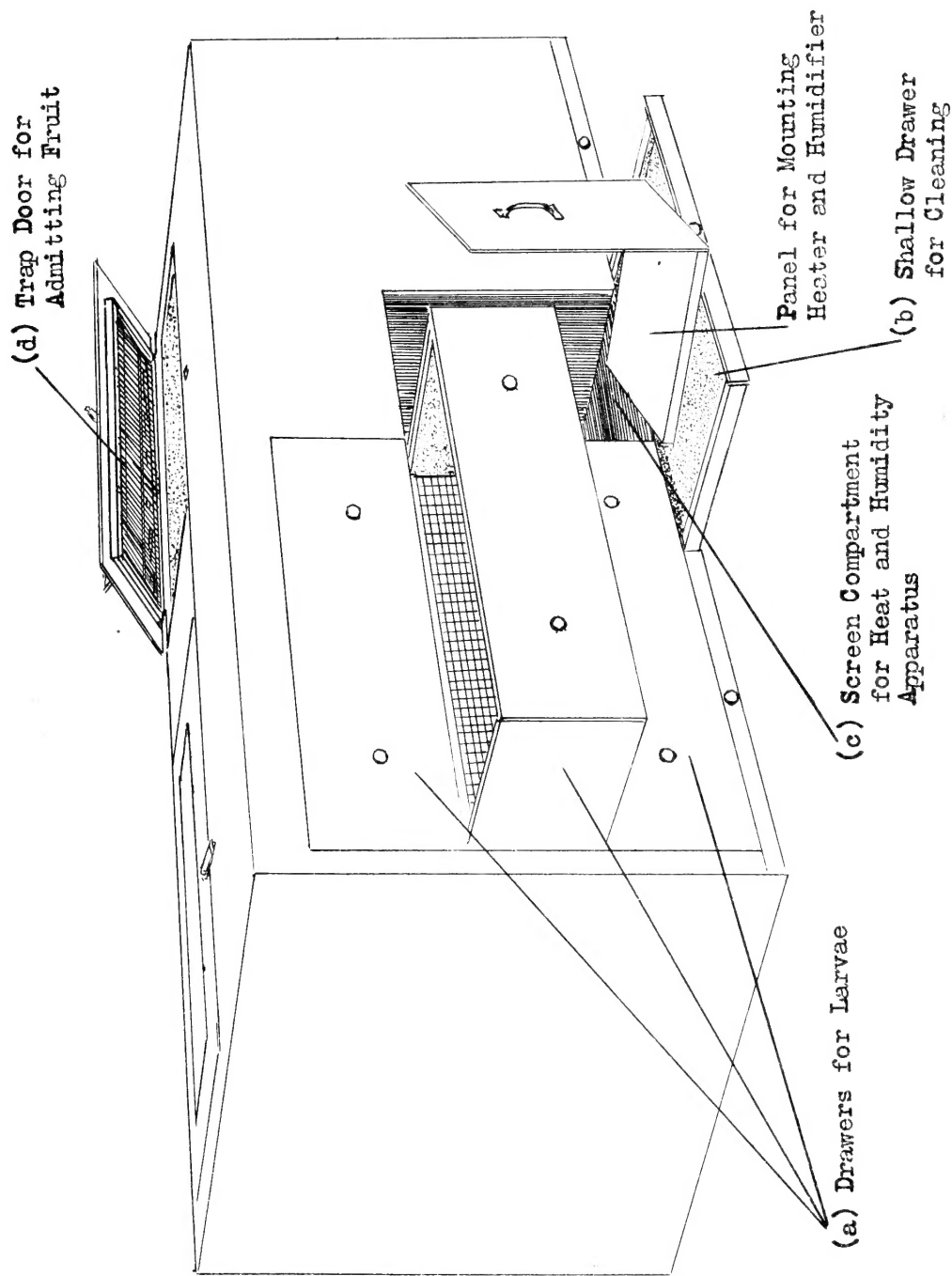


Fig. 2.—Oviposition Cage for Codling Moth. Back View.

